28TF-am02

Pandanus dubius 由来新規アルカロイド類の不斉全合成

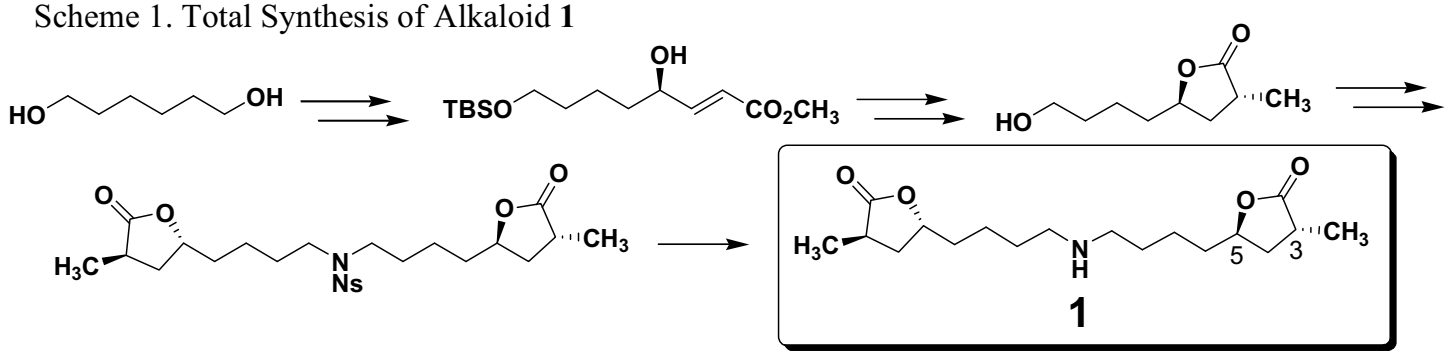
◯Mario A TAN[1], 小暮　紀行[1], 北島　満里子[1], Maribel G NONATO[2], 高山　廣光[1]
([1]千葉大院薬, [2]聖トマス大)

[Introduction] In our continuous search for biologically-active alkaloids from the genus *Pandanus*[1], we have reported the isolation of new alkaloids **1** and **2** from *P. dubius*[2] and their characterization by spectroscopic analysis. To unambiguously confirm their structure including the absolute configuration, the asymmetric total synthesis for the two alkaloids was done.

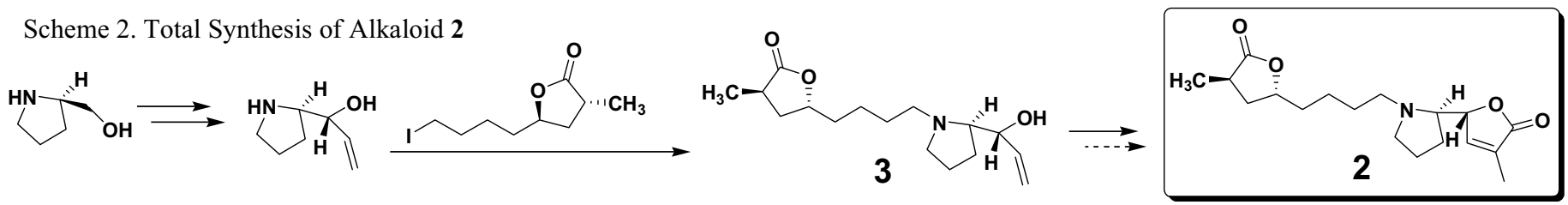
[Result] Starting from 1,6-hexanediol, the alkaloid **1** was synthesized based on the proline-mediated α-aminoxylation, a diastereoselective methylation and Mitsunobu reaction as key steps (Scheme 1). The total synthesis for **1** was completed in 12 steps and 20% over-all yield, thereby the (3***R***, 5***R***) configuration was established.

Condensation of an amino alcohol derived from D-prolinol and γ-butyrolactone iodide gave a synthetic intermediate **3**. Subsequent esterification and RCM reactions will allow the completion of the synthesis of **2** (Scheme 2).

Scheme 1. Total Synthesis of Alkaloid **1**



Scheme 2. Total Synthesis of Alkaloid **2**



References:

1. Nonato, M.G.; Takayama, H.; Garson, M.J.; In *The Alkaloids*; Cordell, GA, Ed., Academic Press: New York, 2008; Vol. 66, pp. 215-249.
2. 129th Annual Meeting of the Pharmaceutical Society of Japan (27P-am137).